**Solano Community College**

Phone: (707) 864-7000

Catalog: http://www.solano.edu/catalog/catalog\_201112/Catalog2011081511.pdf

Website: http://www.solano.edu/

**Electronics – Associates (Transfer), Certificate**

**Program Information**

Designed to prepare the student for employment in industry by providing an extensive background in electronics theory with laboratory application.

**Career Opportunities**

Employment would be at the level of entry-level technologist/technician or engineering

assistant.

**Upon completion of this program, the student will be able to:**

• Apply the principles of engineering.

• Identify, analyze, and solve technical problems.

• Plan, conduct, analyze, and interpret experiments.

• Communicate about engineering solutions effectively through speaking, writing, and graphics.

**Home Technology Integrator Job-Direct – Certificate**

**Program Information**

This certificate provides training to configure, integrate, maintain, and troubleshoot electronic and digital home integration systems. Coursework provides the essential skills for residential networking concepts, components, and information on home network installation. This includes techniques to install, trim, terminate, and troubleshoot cabling systems. In addition, it provides the training and skills necessary to integrate audio, security and environmental controls in a complete system.

**Career Opportunities**

The Digital Home Technology Integrator certificate prepares individuals to design, install, and support residential networks and home integration for employment in the home technology industry. This program develops the technician’s ability to configure, integrate, maintain and troubleshoot home theater, music, security, and home networks.

**Upon completion of this program, the student will be able to:**

• design a home data network

• construct a home telephone network

• evaluate and troubleshoot a home network

• assemble a home audio and video network

• build a wireless home network

• certify a home’s data and telephone network

• set up a security and fire alarm system in a home

• apply industry standards to system design for a home

**Computer Information Security Job-Direct – Certificate**

**Program Information**

This program provides the information and skills necessary for network administration professionals to implement security from internal and external threats for an enterprise network. It covers client and server security on different operating systems, disaster recovery planning, and forensics. This program also provides preparation for several computer information security certification exams, including the Computer Technology Industry Association CompTIA) Security+ exam, Microsoft Certified Systems Engineer (MCSE) exams and several of the Certified Information Systems Security Professional (CISSP) certification exams.

**Career Opportunities**

Information Security Systems Specialist, Computer Technician, Network Administrator, Network Systems Engineer.

**Upon completion of this program, the student will be able to:**

• define best practices for configuring network operating system services to provide optimum security.

• compare and contrast the benefits of firewalls vs. intrusion detection devices and software.

• explain and configure a network firewall to provide optimum security from external threats and exploits.

• analyze organizational needs and implement internal security policies for the enterprise.

• evaluate and implement the required security programs and policies to protect the enterprise against viruses, Trojans, worms, rootkits, and spyware.

• assess and configure secure data transfer protocols for internal and external needs, including Windows IP Security (IPSec) and the Virtual Private Network (VPN) tunneling protocols.

• apply Windows group policy to secure the internal network and shared resources.

• construct NTFS file system permissions and shares to allow only the minimum levels of access needed by users to use network resources.

• prioritize and establish a disaster recovery plan for the enterprise.

• construct and apply group policies and NTFS file system permissions to secure files and network resources.

**Mechatronics – Associates, Certificate**

**Program Information**

Mechatronics is the blending of electronics, mechanics, electrical. and computers to produce a well-rounded technician capable of handling the complex maintenance and operations tasks demanded by modern manufacturing, transportation, communication, and other industries. The modularization of electro-mechanical devices no longer requires in-depth specialization of a single field of study as more emphasis is placed on troubleshooting and replacement skills for maintenance and generalized knowledge of how systems work together for operations and purchasing and planning.

**Career Opportunities**

This degree or certificate prepares the student for the following career opportunities: Industrial mechanical/electrical systems technician, food processing machine service technician, facilities systems technician, waste water systems technician, manufacturing coordinator, field service technician, and mechanical electrical machine systems installer. Obtaining the degree or the certificate improves the opportunities for quality employment and career advancement.

**Upon completion of this program, the student will be able to:**

• integrate the principles of mechatronics to the design of mechatronic systems.

• evaluate mechanical and electrical solutions to solve technological problems.

• analyze data to create trouble shooting processes.

• apply mechatronic principles to the field of robotics and machine automation.

**Alternative Energy Technologies –Classes**

Introduces the topics of power generation, transmission, and consumption of both conventional and alternative energy sources. Students will be exposed to an in-depth analysis of the design and use of fossil fuel based systems and then compare those systems to alternatives. Energy use, in transportation, industrial, commercial, and residential applications will be examined.